Montgomery County Maryland
Department of Permitting Services

Division of
Land Development
Services

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For Staff Use Only

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Water Quality Storm Drain Unit Plan Review Checklist

Project Name: _____ **Engineer/Phone No.** _____

Sediment Control Permit No.: _____ _____

SWM File No.:_____ **Assigned/Phone No.** _____

Plan Type: _____

Submittal Date	**Review Date**	**Initial**
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Legend:

INC	Incomplete/Incorrect
N/A	Not Applicable
SC	Sediment Control
SWM	Stormwater Management
FPDP	Floodplain District Permit
DA	Drainage Area
SPA	Special Protection Area

Plan Acceptable Date

_____

This checklist has been developed to provide specific instruction to engineers. All items are expected to be addressed in the first submittal. Failure to do so may result in less than a full first review.

TO THE ENGINEER:

Your submission for Stormwater Management water Quality Storm Drain Unit Plan approval has been reviewed. The review was made per the following checklist. **Please return the checklist and sediment control plan comment sheets with your resubmittal.** If you do not address a checklist item, including comments on the stormwater management plan sheets, explain your reasoning in your transmittal letter.

SUPPORTING INFORMATION

____	____	____	Completed Sediment Control/Stormwater Management Design Plan Information Form (IF-1).
____	____	____	Maintenance Easement and Covenant
____	____	____	Itemized Stormwater Management Construction Estimate.
____	____	____	Drainage Area Map (200-scale with the site and drainage area boundaries; off-site areas; pre-developed and ultimate (by existing zoning) land uses with corresponding acreage; pre-developed and ultimate development time of concentration flowpaths, if applicable.
____	____	____	Soils Map with site and drainage areas outlined.
____	____	____	Storm drain plans for any site areas not draining directly to the facility (must show safe structural conveyance).
____	____	____	Storm drain systems conveying off-site storm water must meet public (MCDPW&T) storm drainage system standards. Submit one copy of the storm drain plans.
____	____	____	Sediment Control Plan.

____ ____ ____ Site in conformance with Preliminary Plan and/or Site Plan requirements or comments.

GENERAL PLAN REQUIREMENTS

____ ____ ____ Vicinity map with site outlined (1:2,000 scale) on first sheet of the plan set.

____ ____ ____ Existing and final contours (1-foot or 2-feet intervals).

____ ____ ____ Existing and proposed improvements.

____ ____ ____ Delineation of outfall or immediate downstream storm drain system.

____ ____ ____ Facility and manhole location to allow easy access and maintenance.

____ ____ ____ Safe 100-year flowpath.

____ ____ ____ Existing and proposed utility location.

____ ____ ____ Maintenance access from public right-of-way, minimum width 12 feet, maximum grade 15% if mechanically stabilized, 10% maximum without mechanical stabilization.

____ ____ ____ Maintenance easement (must include the unit; any related appurtenances; access points; flow splitting structures; inlet trash racks).

____ ____ ____ Title block (subdivision name with lots and blocks for which control is provided).

____ ____ ____ Inspector checkoff list specific to each facility.

____ ____ ____ Property line boundary and ownership information for adjacent properties.

____ ____ ____ Delineation of 100-year floodplain and 25-foot buffer.

____ ____ ____ North arrow.

____ ____ ____ Certifications: Owner/Developer; Design; Cut/Fill; Maintenance; Structural.

____ ____ ____ Loadings for structural design specified on plan (H-20 for vehicular areas). Submit a copy of the structural computations.

____ ____ ____ Miss Utility note.

____ ____ ____ Sealed by Professional Engineer.

____ ____ ____ Unit is not to be used as an inlet.

____ ____ ____ Details shown on plan for a specific model.

____ ____ ____ Model dimensions – Give all variables.

____ ____ ____ If feasible, locate the unit on a lateral or local storm drain line, preferably serving <5 acres, rather than on a trunk line.

____ ____ ____ Gasket detail on plan.

____ ____ ____ Give top slab and MH rim elevations.

____ ____ ____ Nine (9) inch maximum height for manhole frame.
Secure manhole rim to the top slab (Use WSSC detail S/4.3)

____ ____ ____ All inlets draining to the unit must have surface debris trapping devices with openings < 6-inches in diameter unless drainage passes through a flow splitter trash rack before entering the unit. Trash racks on public storm drains are not permitted. Debris trapping devices are to be included in the maintenance easement and covenant documents.

____ ____ ____ Do not use as a sediment trapping device.

FORMS AND NOTES

____ ____ ____ Standard Notes

____ ____ ____ Provide installation/construction instructions

____ ____ ____ Provide proceedure to seal lift holes

____ ____ ____ Inspector Check-off list specific to each unit

____ ____ ____ Maintenance notes

Stormceptor Review Requirements

____ ____ ____ Bypass area above the weir adequate to pass Q_{10}.

____ ____ ____ Include 24-inch down pipe installation procedure for STC-2400, STC-3600, STC-4800, STC-6000, STC-7200.

____ ____ ____ Two manholes are required if there is less than 3-feet of clearance between the drop inlet pipe and the bottom of the top slab.

____ ____ ____ If < 4-feet between pipe invert and proposed grade, verify that construction of the unit is possible.

____ ____ ____ Show pipe and insert dimensions – pipe type, inverts, exactly one inch difference between the inlet invert and the outlet invert. On a two inlet pipe design, there should be exactly 3-inches difference.

____ ____ ____ No inlet/outlet pipe >36 inches without customization of the insert design.

____ ____ ____ One inlet and one outlet pipe preferred. Two inlet pipes are the maximum allowed.

____ ____ ____ Wherever possible, use smooth, non-corrugated inlet and outlet pipes with a flexible boot sized for the outside pipe diameter. If existing corrugated pipe is being connected to, securely set pipes into the unit with non-shrink grout.

____ ____ ____ Provide procedure for drop pipe installation.

____ ____ ____ Order form with completed sizing information for each unit on plans. Manhole rim elevation specified on the order form.

____ ____ ____ Note that dimensional shop drawings are to be approved by the design engineer and accepted by DPS prior to fabrication. The dimensional shop drawings must be reviewed and signed off by the engineer prior to submittal to DPS.

STORMCEPTOR SIZING

____ ____ ____ For primary water quality, size for a minimum 80% TSS removal rate using the latest Stormceptor sizing guidelines.

____ ____ ____ Total drainage area to the unit shown clearly in the computations.

____ ____ ____ Use “Bethesda” or “Frederick” rainfall data, whichever is closest.

____ ____ ____ Use “Fine” particle size.

BaySaver Review Requirements

____ ____ ____ Sizing computations. For primary water quality, size so that the flow rate of the required water quality volume is at or below the “Optimal Treatment Capacity”. Other sizing may be used if the unit serves as pretreatment only. Do not size per impervious drainage area.

____ ____ ____ Show detail of downstream storm drain connection.

____ ____ ____ Shop drawing is not required for BaySaver.

____ ____ ____ Detail dimensions are accurately reflected in the dimension table on the plan.

ADDITIONAL REQUIREMENTS:

COMMENTS: